



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,228	03/19/2001	Noriyoshi Shida	040894-5642	6917

9629 7590 10/11/2002

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

HECKENBERG JR, DONALD H

ART UNIT	PAPER NUMBER
----------	--------------

1722

10

DATE MAILED: 10/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,228

Applicant(s)

SHIDA ET AL.

Examiner

Donald Heckenberg

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on August 1, 2002 is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1722

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "vacuum portions" recited in claims 9 and 10 must be shown or the feature(s) canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9 and 10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 9 recites, "said first heat suppressing member and said second heat suppressing member are arranged in a manner in which they each include a vacuum portion therein." Claim 10

Art Unit: 1722

recites a similar limitation. The only description of these limitations in the disclosure is at page 24, lines 15-18. This passage only recites language similar to that recited in claims 9 and 10. It is not clear what a vacuum portion is, where the vacuum portion is located on the annular ring, what the purpose of the vacuum portion is, or how one of ordinary skill in the art would make such a structure. Therefore, the subject matter of claims 9 and 10 is not enabled by the disclosure.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3, 5, and 8, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, lines 10-11 recite "said first heat suppressing member" for which there is no antecedent basis. Similarly, claim 8 recites "said second heat suppressing means" in line 1. There is no antecedent basis for this limitation in claim 8.

Art Unit: 1722

Claim 5 recites, "said molding space has substantially the same volume as said conduction member." The terminology "substantially the same volume" is relative terminology. The disclosure of the instant application does not provide a description of what constitutes substantially the same volume. Thus, the scope of claim 5 is indefinite.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (US Pat. No. 5,705,105; previously of record).

Inoue teaches an injection mold for manufacturing a disc substrate comprising a pair of mold bodies (14 and 25) which are disposed in a manner that circular-shaped mold forming surfaces thereof are opposed to each other to form a disc-shaped mold space therebetween (see fig. 2), a conduction member (27) which is fitted to one of the pair of mold bodies so as to communicate with outside through a conduction path for conducting molten

Art Unit: 1722

molding material injection form the outside into the disc-shaped mold space (see col. 5, lns. 48-54), and a first heat suppressing member (28) for suppressing heat within the conduction path from being transmitted to the first mold body (25), with the first heat suppressing member being disposed between the conduction member and the first mold body (fig. 2, see col. 6, lns. 51-53).

Inoue also teaches a stamp inner holder member (12) on a position opposite the first mold suppressing member on the second mold body. Such a member would inherently act to block some heat from being transmitted between the punch and ejector mechanism (17, 18, 19) and the second mold body (14). Hence, the member (12) would act as a heat suppressing member.

Inoue further teaches the mold to comprise a molding space (10) disposed at a portion at the other of pair of mold bodies opposing to the conduction member, with the mold space having substantially the same volume as the conduction member (see fig. 2).

8. Applicant's arguments filed August 1, 2002 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 1 and 3 have been considered but are moot in view of the new ground(s) of

Art Unit: 1722

rejection. Note that the amendment filed August 1, 2002 necessitated this new grounds of rejection. Although language somewhat similar to the newly added language of claims 1 and 3 was recited previously in claims 2 and 4, the language was of a different scope. Claims 2 and 4 recited that the second heat suppressing member (or second heat suppressing means) was at a position opposing the first heat suppressing member, which was interpreted as requiring a face to face opposition as shown in figure 2 of the instant application. The newly added language of the "second heat suppressing member at a position opposite [the] first heat suppressing member on a second mold body side[.]" "Opposite" merely requires the second heat suppressing member to be on second mold body opposite the first mold body. Inoue anticipates this language as described above.

Applicant argues with respect to claim 5 that Inoue teaches a molding space that is smaller than that of conduction member (27). Thus, Applicant contends that Inoue fails to teach or suggest the molding space to have substantially the same volume as the conduction member as recited in claim 5.

As noted above in the rejection under 35 U.S.C. 112, second paragraph, the scope of "substantially the same volume" is not clear from the disclosure of the instant application. For example, 75% could be substantially the same volume, or 99%

Art Unit: 1722

could be the same volume. As such, Applicant's argument that Inoue's molding space does not anticipate "substantially the same volume" cannot be used to show patentability over the Inoue reference. As described above, Inoue teaches a molding space with a volume similar to that of the conduction path, and therefore anticipates the language of claim 5 as best interpreted in light of the disclosure of the instant application.

9. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 8-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first and second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest a mold for injection molding of a disc comprising a pair of mold bodies

Art Unit: 1722

which are disposed in a manner that circular-shaped mold forming surfaces thereof are opposed to each other to form a disc-shaped mold spaced therebetween, a conduction member or means which is fitted to a first of the mold bodies so as to communicate with the outside through a conduction path for conducting molten material injected from outside into the disc-shaped mold space, and a first heat suppressing member or means for suppressing heat within the conduction path from being transmitted to the first of the mold bodies disposed, the first heat suppressing member or means being disposed between the conduction member or means and the first mold body, and a second heat suppressing member or means positioned opposite the first heat suppressing member or means on the second mold body, wherein the second heat suppressing member or means is formed by a material of a ceramic system having a coefficient of thermal conductivity which smaller than that of a cutting mechanism and a releasing mechanism of the mold, but larger than that of the first heat suppressing member or means as recited in claims 7 and 8.

The closest prior art taught by Inoue is discussed above. Inoue fails to teach or suggest the second heat suppressing member to formed by a material of a ceramic system having a coefficient of thermal conductivity which smaller than that of a

Art Unit: 1722

cutting mechanism and a releasing mechanism of the mold, but larger than that of the first heat suppressing member.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (703) 308-6371. The

Art Unit: 1722

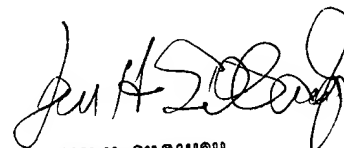
examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jan Silbaugh, can be reached at (703) 308-3829. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for responses to non-final action, and 703-872-9311 for responses to final actions. The unofficial fax phone number is (703) 305-3602.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Donald Heckenberg
October 8, 2002



JAN W. SILBAUGH
SUPERVISORY PATENT EXAMINER
ART UNIT 1722

10/10/02